WHAT IS CLAIMED IS:

1. An inspection apparatus for an electrode plate-connected structure for a secondary cell for inspecting each bonding portion of an electrode plate-connected structure for a secondary cell including a plurality of electrode plates which are arranged in parallel to one another at prescribed intervals and are perpendicularly connected to a power collecting plate, the apparatus characterized by comprising:

a lighting section for irradiating light to each of the bonded portions of the plurality of electrode plates and the power collecting plate of the electrode plate-connected structure for a secondary cell;

a light receiving section for detecting a projected image of each of the bonded portions based on the light irradiated to the electrode plate-connected structure for a secondary cell by the lighting section; and

an evaluation section for evaluating a bonding state of each of the bonding portions based on the projected image of each of the bonded portions detected by the light receiving section.

2. An inspection apparatus for an electrode plate-connected structure for a secondary cell according to claim 1, wherein the light receiving section receives light passing through both sides of each of the electrode plates of the electrode plate-connected structure for a secondary cell.

3. An inspection apparatus for an electrode plate-connected structure for a secondary cell according to claim 1, wherein the evaluation section evaluates a bonding state of each of the bonded portions by measuring a height of a lowest

point of each of the bonded portions based on the projected image of each of the bonded portions so as to compare the measured height of the lowest point with a reference value.

4. An inspection apparatus for an electrode plate-connected structure for a secondary cell according to claim 1, wherein the evaluation section detects a thickness of each of the plurality of the electrode plates based on the projected image of each of the bonded portions.

5. An inspection apparatus for an electrode plate-connected structure for a secondary cell according to claim 1, wherein the evaluation section detects an inclination state of each of the plurality of the electrode plates based on the projected image of each of the bonded portions.

6. An inspection apparatus for an electrode plate-connected structure for a secondary cell according to claim 1, wherein the evaluation section evaluates a lowest point of each of the bonded portions based on the projected image of each of the bonded portions and a bonding state of each of the bonded portions based on a position of each of the bonded portions which is in contact with a surface of each of the electrode plates located on opposite sides of each of the bonded portions.

7. An inspection apparatus for an electrode plate-connected structure for a secondary cell according to claim 1, wherein the light receiving section receives light reflected by each of the bonded portions.

8. An inspection method for inspecting an electrode plate-connected structure for a secondary cell by inspecting

each bonding portion of an electrode plate-connected structure for a secondary cell including a plurality of electrode plates which are arranged in parallel to one another at prescribed intervals and are perpendicularly connected to a power collecting plate, the method characterized by comprising the steps of:

irradiating light to each of the bonded portions of the plurality of electrode plates and the power collecting plate of the electrode plate-connected structure for a secondary cell;

detecting a projected image of each of the bonded portions based on the light irradiated to the electrode plate-connected structure for a secondary cell by the lighting section; and

evaluating a bonding state of each of the bonding portions based on the projected image of each of the bonded portions detected by the light receiving section.

9. An inspection method for inspecting an electrode plate-connected structure for a secondary cell according to claim 8, wherein the projected image is acquired based on light passing through both sides of each of the electrode plates of the electrode plate-connected structure for a secondary cell.

10. An inspection method for inspecting an electrode plate-connected structure for a secondary cell according to claim 8, wherein the step of evaluating includes evaluating a bonding state of each of the bonded portions by measuring a height of a lowest point of each of the bonded portions based on the projected image of each of the bonded portions so as to compare the measured height of the lowest point with a reference value.

11. An inspection method for inspecting an electrode plate-connected structure for a secondary cell according to claim 8, wherein the step of evaluating includes detecting a thickness of each of the plurality of the electrode plates based on the projected image of each of the bonded portions.

12. An inspection method for inspecting an electrode plate-connected structure for a secondary cell according to claim 8, wherein the step of evaluating includes detecting an inclination state of each of the plurality of the electrode plates based on the projected image of each of the bonded portions.

13. An inspection method for inspecting an electrode plate-connected structure for a secondary cell according to claim 8, wherein the step of evaluating includes evaluating a lowest point of each of the bonded portions based on the projected image of each of the bonded portions and a bonding state of each of the bonded portions based on a position of each of the bonded portions which is in contact with a surface of each of the electrode plates located on opposite sides of each of the bonded portions.

14. An inspection method for inspecting an electrode plate-connected structure for a secondary cell according to claim 8, wherein the projected image is acquired based on light reflected by each of the bonded portions.